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CS 472 -1001, Spring 2025

Commit History Executive Summary

Purpose

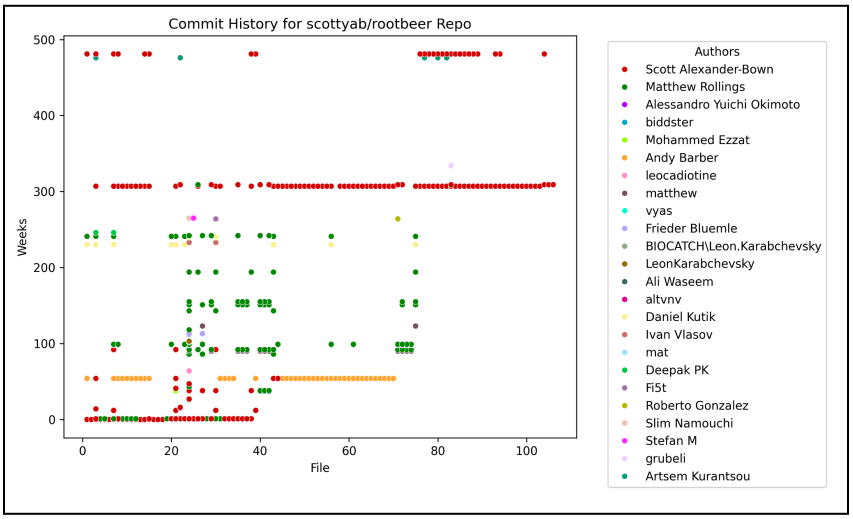
This report highlights the commit history of Github user @scottyab's 'rootbeer' repository. It displays which source files were changed each week by each contributor and provides insight into the project's current and future status. The link to my analysis repository can be found here.

Analysis Process

In the file 'RileyRamos_authorsFileTouches.py,' I used Github's API to gather commit data, including the date, which source files were included, and the author. To filter for source files, I only included files that had the 'src' directory in its path. I compiled this information into a CSV file with columns for a file name, author, and date the author touched the file. If a particular commit contained multiple files changed, then each file was listed as a separate entry with its associated date and author.

Next, in the file 'RileyRamos_scatterplot.py,' I transformed the CSV file into a data frame for easier data manipulation. I then assigned each commit entry with a week number, signifying which week the commit occurred since the repository's creation by calculating the date difference from the earliest commit. Next, I assigned each unique file name with a number for more concise plotting. Lastly, I created a scatter plot of the data (seen in the figure below). In addition to the library "matplotlib", I used "seaborn" and "colorcet" to allow for a wider color range that visually distinguishes the authors, as I found the default color palettes were not large enough to assign a unique color to each author.

Findings



Scott Alexander-Brown and Matthew Rollings are the most frequent and consistent contributors. There are only a few other consistent contributors, including Ali Waseem, Andy Barber, and Daniel Kutik. The remaining contributors seem to have contributed only a few times during the earlier weeks of development and haven't contributed changes since then, so they may have left the project. Thus, it can be inferred that this project is mostly complete and stabilized. The recent commits can be attributed to maintenance changes. If the commit history follows the present trends, it will continue to have sparse maintenance changes.